

Advanced Axle Classification for Toll (AACT)



Advanced Single/Dual/Super Single Classification

VectorSense™ for Toll Systems

The VectorSense™ Tire Sensor Suite is accurate and reliable, using a proprietary tire-sensing technology to determine single, dual or super single tire groups on vehicle axles. The system operates independently of vehicle speed.

VectorSense™ is a superior alternative to toll treadle technologies for pre and post-audit applications. VectorSense™ sensors do not experience the premature wear patterns that can affect other types of single/dual sensors.

The VectorSense™ Tire Sensor Suite can be used to improve toll audit systems. By sensing the tire footprint at any point along the sensor, VectorSense™ provides lane position data and track width. This data can be used by toll system integrators to ensure greater accuracy of classification, protection from incidental counts, and elimination of “missed” vehicles due to lane straddling.



VectorSense™ Tire Sensors provide accurate axle classification

Features

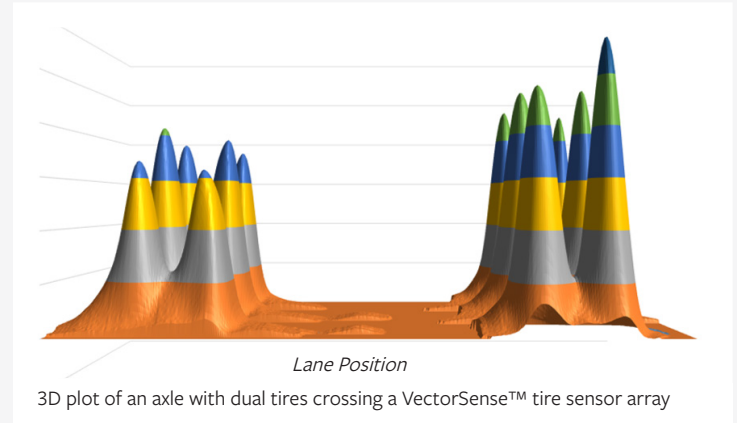
- Provides highly accurate axle data due to proprietary VectorSense™ tire sensor suite technology
- Exceptional reliability due to long sensor life and redundant sensor layout
- Comprehensive per axle data output in real-time after each axle passes by:
 - Single/Dual/Super Single tire classification
 - Axle tire count
 - Axle speed and direction
 - Axle track width and lateral position
 - Sensor health information
 - Detection warning codes
- Unique axle dataset allows integrators to accurately classify more vehicle types
- Power over Ethernet (PoE) connection to the lane controllers
- Shallow sensor installation in 1.5 inch (4 cm) deep slots allows installation over an inductive loop in concrete

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Specifications

Installation Time	< 4 hours
Axle Detection	> 99.99%
Tire Classification Accuracy	> 99.9%
Speed Range	up to 160 km/h (100 mph)
Activation Life	> 20,000,000 axles

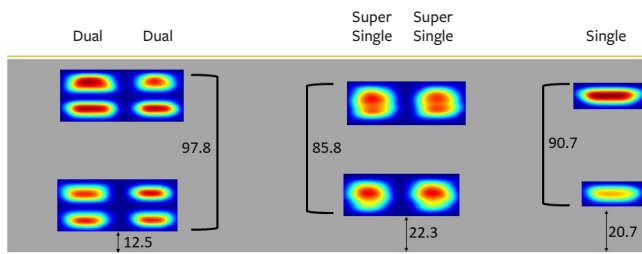
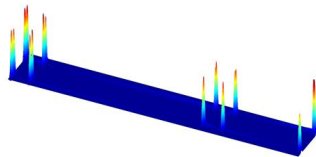
Tire Sensor Response (dual axle)



VectorSense™ Tire Sensors correctly classify axles with anomalous tires



Speed: 65 mph



**All measurements in inches

Heatmap representation of VectorSense™ axle data



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